

## CLAIMS

### WHAT IS CLAIMED IS:

1. An antenna comprising:  
a ground plane;  
a first conductor having a first length extending longitudinally above the ground plane and having a first end electrically connected to the ground plane at a first location;  
a second conductor having a second length extending longitudinally above the ground plane and parallel to the first conductor, the second conductor having a first end electrically connected to the ground plane at a second location;  
an antenna feed coupled to the first conductor;  
wherein the first and second conductors are equidistant from the ground plane.
2. The antenna of claim 1 wherein the first and second conductors are both disposed on a single substrate.
3. The antenna of claim 2 wherein the single substrate comprises a flexible printed circuit substrate.
4. The antenna of claim 1 wherein the first length is approximately equal to the second length.
5. The antenna of claim 4 wherein the first location is spaced apart from the second location by a distance approximately equal to the first length.
6. The antenna of claim 1 wherein the first and second conductors comprise a first antenna element and further comprising a second antenna element having a third conductor and a fourth conductor.
7. The antenna of claim 6 wherein the second antenna element is a parasitic element.
8. The antenna of claim 6 wherein the first and second antenna elements are parallel to each other.

10076922-021402

10076922-021402

A1

9. The antenna of claim 6 wherein the first and second antenna elements are non-parallel to each other.
10. The antenna of claim 6 wherein the third and fourth conductors are equidistant from the ground plane at a distance equal to a distance between the first and second conductors and the ground plane.
11. The antenna of claim 6 wherein the third and fourth conductors are equidistant from the ground plane at a distance different from a distance between the first and second conductors and the ground plane.
12. The antenna of claim 1 further comprising an electronic device having a housing and wherein the ground plane is adjacent to a first surface of the housing and the first and second conductors are adjacent to a second surface of the housing.
13. The antenna of claim 1 wherein the first and second conductors are arched above the ground plane.
14. The antenna of claim 13 wherein the first and second conductors are electrically connected to the ground plane with respective spring contacts.
15. The antenna of claim 1 further comprising an electronic device having a housing and wherein the ground plane is adjacent to a first surface of the housing and the first and second conductors are adjacent to a second surface of the housing. } no say
16. An antenna comprising:
  - a ground plane;
  - an array of radiating elements, each of the radiating elements having a first conductor extending longitudinally above the ground plane and having a first end electrically connected to the ground plane at a first location, and a second conductor extending longitudinally above the ground plane and parallel to the first conductor, the second conductor having a first end electrically connected to the ground plane at a second location;

an antenna feed coupled to the first conductor of at least one of the radiating elements;  
wherein the first and second conductor of each of the radiating elements are equidistant from the ground plane.

17. The antenna of claim 16 wherein the first and second conductors of each of the radiating elements are both disposed on a respective single substrate.
18. The antenna of claim 17 wherein each of the single substrates comprises a flexible printed circuit substrate.
19. The antenna of claim 16 wherein at least one of the radiating elements is a parasitic element.
20. The antenna of claim 16 wherein at least some of the radiating elements are parallel to each other.
21. The antenna of claim 16 wherein at least some of the radiating elements are orthogonal to at least some others of the radiating elements.
22. The antenna of claim 16 wherein all of the first and second conductors are equidistant from the ground plane.
23. The antenna of claim 16 wherein the first and second conductors of at least one of the radiating elements are spaced apart from the ground plane at a first distance and the first and second conductors of at least one other of the radiating elements are spaced apart from the ground plane at a second distance different from the first distance.
24. The antenna of claim 16 wherein each of the first conductors has a length and each of the second conductors has a length approximately equal to the length of a corresponding first conductor.
25. The antenna of claim 24 wherein the length of the first and second conductors of at least one of the radiating elements is different from the length of the first and second conductors of at least one other of the radiating elements.

26. An antenna comprising:
- a ground plane;
  - a generally "U"- shaped conductor having first and second parallel legs lying in a plane spaced apart from the ground plane;
  - an antenna feed coupled to a first end of the first leg;
  - a short between the ground plane and at least one of the first and second legs.
27. The antenna of claim 26 wherein the short extends from the ground plane to the first end of the first leg.
28. The antenna of claim 26 further comprising a parasitic antenna element in proximity to the "U"- shaped conductor.
29. The antenna of claim 28 wherein the parasitic antenna element is disposed to a side of the "U"- shaped conductor.
30. The antenna of claim 28 wherein the parasitic antenna element is disposed between the plane of the "U"- shaped conductor and the ground plane.
31. The antenna of claim 28 wherein the parasitic antenna element comprises a first conductor having a first length extending longitudinally above the ground plane and having a first end electrically connected to the ground plane, a second conductor having a second length extending longitudinally above the ground plane and parallel to the first conductor, the second conductor having a first end electrically connected to the ground plane, wherein the first and second conductors are equidistant from the ground plane.